

5'	GCT	CCC	CGC	GGC	GGC	TGG	CGT	CGG	GAA	AGT	ACA	GTA	AAA	AGT	CCG	AGT	GCA	GCC
	9	18	27	36	45	54												
	63	72	81	90	99	108												
	GCC	GGG	CGC	AGG	ATG	GGA	TCC	GGC	TCC	AGC	TAC	CGG	CCC	AAG	GCC	ATC	TAC	
L	D	I	M	G	S	G	S	G	S	S	Y	R	P	K	A	I	Y	
	117	126	135	144	153	162												
	CTG	GAC	ATC	GAT	GGA	CGC	ATT	CAG	AAG	GTA	ATC	TTC	AGC	AAG	TAC	TGC	AAC	TCC
S	D	I	M	D	G	R	I	Q	K	V	I	F	S	K	Y	C	N	S
	171	180	189	198	207	216												
	AGC	GAC	ATC	ATG	GAC	CTG	TTC	TGC	ATC	GCC	ACC	GCC	CTG	CCT	CGG	AAC	ACG	ACC
I	S	D	I	M	D	L	F	C	I	A	T	G	L	P	R	N	T	T
	225	234	243	252	261	270												
	ATC	TCC	CTG	CTG	ACC	GAC	GAC	GCC	ATG	GTC	TCC	ATC	GAC	CCC	ACC	ATG	CCC	
I	S	L	L	T	T	D	D	A	M	V	S	I	D	P	T	M	P	
	279	288	297	306	315	324												
	GGG	AAT	TCA	GAA	CGC	ACT	CCG	TAC	AAA	GTG	AGA	CCT	GTG	GCC	ATC	AAG	CAA	CTC
A	N	S	E	R	T	P	Y	K	V	R	P	V	A	I	K	Q	L	
	333	342	351	360	369	378												
	TCC	GCT	GGT	GTC	GAG	GAC	AAG	AGA	ACC	ACA	AGC	CGT	GGC	CAG	TCT	GCT	GAG	AGA
S	A	G	V	E	D	K	R	T	T	S	R	G	Q	S	A	E	R	

FIGURE1A

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## FIGURE 1B

		765	CAC AAG TTG ACT CCT CGA CGC GAT GTT CCC ACT TAC CCC AAG TAC CTG CTG	801
H	K	L	T P R R D V P T Y P K Y L L	810
S	P	E	T I E A L R K P T F D V W L W	810
GAG	CCC	AAT	GAG ATG CTG AGC TGC CTG GAG CAC ATG TAC CAC GAC CTC TGG CTG	864
E	P	N	M L S C L E H M Y H D L G L	864
GTC	AGG	GAC	TTC AGC ATC AAC CCT GTC ACC CTC AGG AGG TGG CTG TTC TGT GTC	918
V	R	D	F S I N P V T L R R W L F C V	918
CAC	GAC	AAC	TAC AGA AAC CCC TTC CAC AAC TTC CGG CAC TGC TTC TGC GTG	963
H	D	N	Y R N N P F H N F R H C F C V	963
GCC	CAG	ATG	TAC AGC ATG GTC TGG CTC TGC AGT CTC CAG GAG AAG TTC TCA	1026
A	Q	M	M Y S M V W L C S L Q E K F S	1026
CAA	ACG	GAT	ATC CTG ATC CTA ATG ACA GCG GCC ATC TGC CAC GAT CTG GAC CAT	1134
Q	T	D	I L I L M T A A I C H D L D H	1134

FIGURE 1C

1143	GGC TAC AAC ACG TAC CAG ATC AAT GCC CGC ACA GAG CTG GCG GTC CGC	1152	1161	1170	1179	1188
P G Y N N T Y Q I N A R T E L A V R						
1197	TAC AAT GAC ATC TCA CCG CTG GAG AAC CAC CAC TGC GCC GTG GCC TTC CAG ATC	1206	1215	1224	1233	1242
Y N D I S P L E N H H C A V A F Q I						
1251	CTC GCC GAG CCT GAG TGC AAC ATC TTC TCC AAC ATC CCA CCT GAT GGG TTC AAG	1260	1269	1278	1287	1296
L A E P E C N I F S N I P P D G F K						
1305	CAG ATC CGA CAG GGA ATG ATC ACA TTA ATC TTG GCC ACT GAC ATG GCA AGA CAT	1314	1323	1332	1341	1350
Q I R Q G M I T L I A T D M A R H						
1359	GCA GAA ATT ATG GAT TCT TTC AAA GAG AAA ATG GAG AAT TTT GAC TAC AGC AAC	1368	1377	1386	1395	1404
A E I M D S F K E K M E N F D Y S N						
1413	GAG GAG CAC ATG ACC CTG CTG AAG ATG ATT TTG ATA AAA TGC TGT GAT ATC TCT	1422	1431	1440	1449	1458
E E H M T L L K M I L I K C C D I S						
1467	AAC GAG GTC CGT CCA ATG GAA GTC GCA GAG CCT TGG GTG GAC TGT TTA TTA GAG	1476	1485	1494	1503	1512
N E V R P M E V A E P W V D C L L E						

## FIGURE 1D

1521		1530	1539	1548	1557	1556		
GAA	TAT	TTT	ATG	CAG	AGC	GAC	CGT	GAG
E	Y	F	M	Q	S	D	R	E
1575		1584	1593	1602	1611	1620		
TTC	ATG	GAC	CGA	GAC	AAA	GTG	ACC	AAG
F	M	D	R	D	K	V	T	K
1629		1638	1647	1656	1665	1674		
TTT	GTC	CTG	ATC	CCA	ATG	TTT	GAA	ACA
F	V	L	I	P	M	F	E	T
1683		1692	1701	1710	1719	1728		
GAG	ATC	ATG	CTG	CAG	CCA	CTT	TGG	GAA
E	I	M	L	Q	P	L	W	E
1737		1746	1755	1764	1773	1782		
CGG	ATA	GAT	GAC	GCC	ATG	AAA	GAG	AAG
R	I	D	D	A	M	K	E	L
1791		1800	1809	1818	1827	1836		
GGG	GCC	ACC	GAG	AAG	TCC	AGA	AGC	AGA
G	A	T	E	K	S	R	E	R
1845		1854	1863	1872	1881	1890		
GAC	TGT	GCC	TGA	GGA	AAG	CGG	GGG	TGG
D	C	A						

FIGURE 1E

1899            1908            1917            1926            1935            1944  
AGC TGC GCG GGA TCC TTG TGC AGG GAA GAG CTG CCC TGG GCA CCT GCC ACC ACA

1953            1962            1971            1980            1989  
AGA CCA TGT TTT CTA AGA ACC ATT TTG TTC ACT GAT ACA AAA AAA AAA AA 3'

FIGURE 1F

1	M G - - - - -	S G S S S Y R P K A I Y L D I D - - - - -	PDE9A
1	L A C F L D K H H D I I I D H R N P R Q L D A E A L C R S I R S S K L S E N T PDE8A		
1	M - - F Q H Q T N P G G P T N R R P R D Q E I H Q E P R Y P K A R R - - - - -	g829179	
19	- - - G R I O K V I F S - - - - -	[K Y C N S S D I M - - - - - D] PDE9A	
41	V I V G V V R R V D R E E L S V M P F I S A G F T R R Y V E N P N I M A C Y N E PDE8A		
34	- - - - - H T P A W P P T Q S R S W T G A S T S W R - - P S R P I A A - - - - -	g829179	
38	L F C I A T G L P R N - - - - -	[T T I S L L T T D D A M V S I D P T M - PDE9A	
81	L L Q I E F G E V R S Q L K L R A C N S V F - T A L E I T S E D R PDE8A		
62	- - - - - S P T W R R L S S N A C S T R S C R T L A S P A D - - - - - R E I R g829179		
68	- - - - - P A N S E R T P Y K V R P V A I K Q L S A G - V E D K R T T - - - - -	PDE9A	
120	F I Q Y A N P A F E T T M G Y Q S G E L I G K E L G E V P I N E K K A D L L D T PDE8A		
91	F P N I Y V P H F - - - - -	g829179	
97	- - - - - S R G Q S A E R P L R D R R V V G L E Q O P PDE9A		
160	I N S C I R I G K E W Q G I Y Y A K K N G D N I Q Q N V K I I P V I G Q G G K PDE8A		
100	- - - - - W D - - - - -	g829179	

FIGURE 2A

FIGURE 2B

118	R R E G A F E S G Q V	- - - - -	E P R P R E P Q G C Y Q Q E G Q R I P	PDE9A
200	I R H Y - V S I I R V	C N G N N K A E K I S E C V Q S D T R T D N Q   T G K H K D	PDE8A	
103	Q Q E F D L P S L R V	E D N P E L V A A N A A A G Q Q   S A G Q Y A	g829179	
147	P E R E E L - I Q S V L A Q V A E	- - - - -	Q F S R A F K I N E L K A E - - V A	PDE9A
239	R R K G S L D V K A V A S R A T E	V S S Q R R H S S M A R I H S M T I E A P I T	PDE8A	
136	R S R S P - - - - -	- - - - - R G P P M S Q I S G V K - - - - -	g829179	
179	N H L A V A V L E K R V E	- - - - -	L E G L K V V E I E K C K S D I	PDE9A
279	K V I N V I N A A Q E	S S P M P V T E A L D R V I L R T T E L Y S P Q F G A	PDE8A	
153	- - - - - - - - - R P L S H T N S F T - - - - -	- - - - - G E R L - - P T F G V	g829179	
206	K K - - - - -	M R E E L A A R S S R T N C P C K Y S F L D N H K K L T P R R	PDE9A	
319	K D D D P H A N D L V G G L M S D G L R R L S G N E Y V L S T K N T Q M V S S N	PDE8A		
172	- E T P R E N E L - G T L L G E - - - - -	- - - - -	g829179	
239	D V P T Y P K Y L L S P E T I E A L R K P T F D V W L W E P N E M	- - - - -	PDE9A	
359	I I T P I S I L D D V P P R I A R A M E N E E Y - - W D F D I F E L E A A T H N R	PDE8A		
186	- - - - - L D T - - - - -	- - - - - W G I Q I F S I G E F S V N R	g829179	

272 - L S C L E - H M Y H D L G L V R D F S I N P V T L R R W L F C V H D N Y - R N PDE9A  
 397 P L I Y L G L K M F A R F G I C E F L H C S E S S T L R S W L Q I I E A N Y H S S PDE8A  
 204 P L T C V A Y T I F Q S R E L L T S L M I P P K T F L N F M S T I L E D H Y V K D 9829179

309 N P F H N F R H C F C V A Q M M Y S M V W L C S L Q E K F S Q T D I I L I L M T A PDE9A  
 437 N P Y H N S T H S A D V L H A T A Y F L S K E R I K E T L D P I D E V A A L I A PDE8A  
 244 N P F H N S L H A A D V T Q S T N V L L N T P A L E G V F T P L E V G G A L F A 9829179

349 A I C H D L D H P G Y N N T Y Q I N A R T E L A V R Y N D I S P L E N H H C A V PDE9A  
 477 A T I H D V D H P G R T N S F L C N A G S E L A I L Y N D T A V L E S H H A A L PDE8A  
 284 A C I H D V D H P G L T N Q F L V N S S S E L A L M Y N D E S V L E N H H L A V 9829179

389 A F Q I L A E P E - C N I F S N I P P D G F K O I R Q G M I T L I L A T D M A R PDE9A  
 517 A F Q I L T T G D D K C N I F K N M E R N D Y R T L R Q G T I D M V L A T E M T K PDE8A  
 324 A F K I L L Q N Q G - C D I F C N M Q K K Q R Q T L R K M V I D I V L S T D M S K 9829179

428 H A E I M D S F - - - K E K M E N F D Y S N E - - - - - - - - - - - - - - - - E PDE9A  
 557 H F E H V N K F V N S I N K P L A T L E E N G E T D K N Q E V I N T M L R T P E PDE8A  
 363 H M S L - L A D L K T M V E T K K V A G S G V L L D N Y T 9829179

FIGURE 2C

FIGURE 2D

449	H M T L L K M I L I K C C D I S N E V R P M E V A E P W V D C L L E Y F M Q S	PDE9A
597	N R T L I K R M I L I K C A D V S N P C R P L Q Y C I E W A A R I S E E Y F S Q T	PDE8A
392	D R I Q V L E N I L V H C A D I L S N P T K P L P L Y K R W V A I L M E E F F L Q G	g829179
489	D R E K S E G L P V A - P F M D R D K V T K A T A Q I G F I K F V L I P M F E T	PDE9A
637	D E E K Q Q G L P V M P V F D R N T C S I P K S Q I S F I D Y F I T D M F D A	PDE8A
432	D K E R E S G M D I S - P M C D R H N A T I E K S Q V G F I D Y I V H P L W E T	g829179
528	V T K L F P M V E E I M L Q P L - - - - - [W] - - - - - - - - - - - - - - -	PDE9A
677	W D A F V - - D L P D L M O H I L D N N F K Y W K G L - - - - - - - - - - -	PDE8A
471	W A S L V H P D A Q D I L D T L E E N R D Y Y Q S M I P P S P P P S G V D E N P	g829179
545	- E S R D R Y E - E L K R I D D A - M K E L O K K T D S L - - - - - T S G A	PDE9A
701	- - - - - - - - - - - D E M K L R N L R P P P E	PDE8A
511	Q E D R I R F Q V T L E E S D Q E N L A E L E E G D E S G G E T T T G T T G T	g829179
575	T E K S R E R S R D - - - - - V K N S E G D C A	PDE9A
713		PDE8A
551	T A A S A L R A G G G G G G G M A P R T G G C Q N Q P Q H G G M	g829179

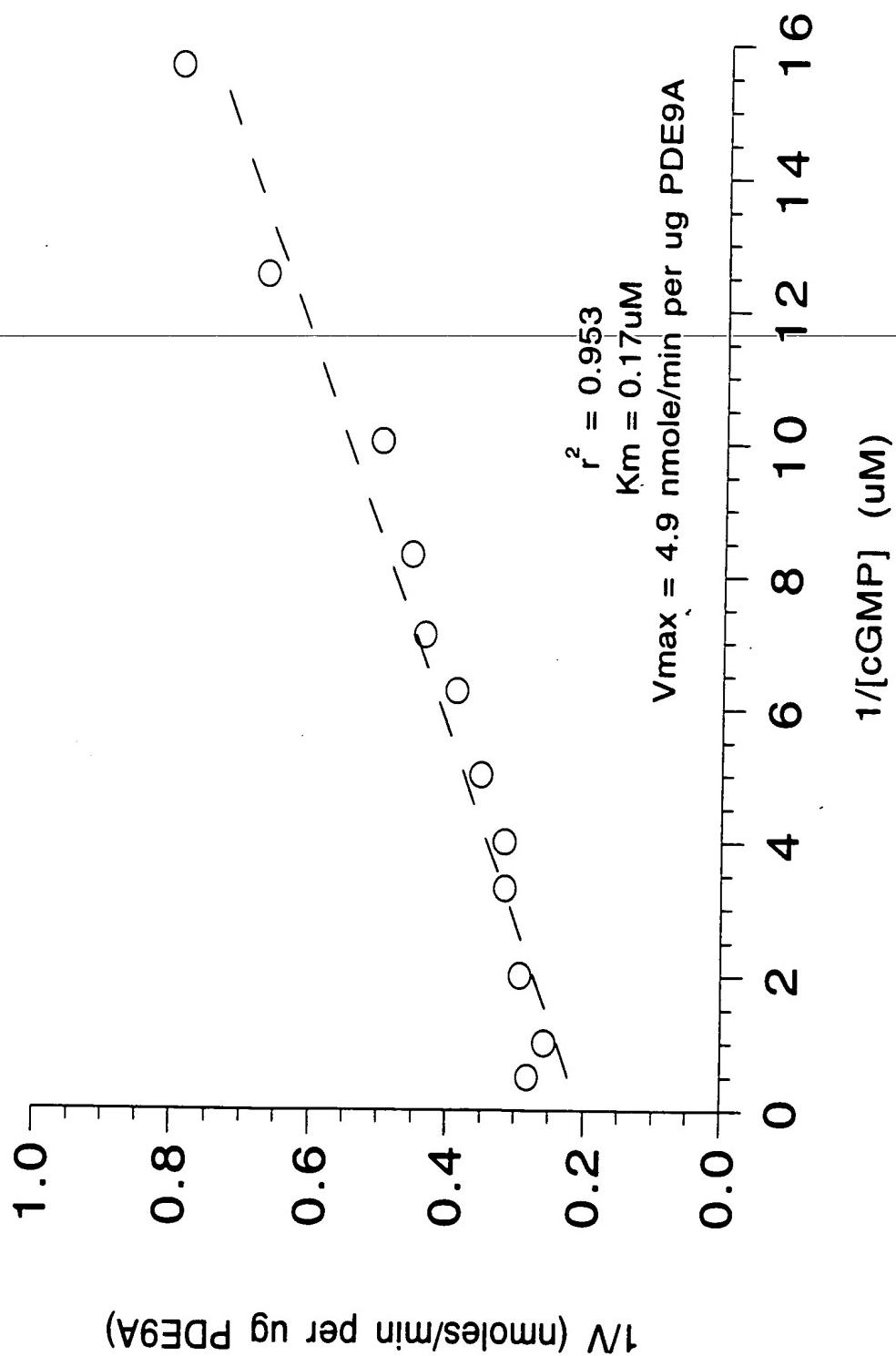


FIGURE 3

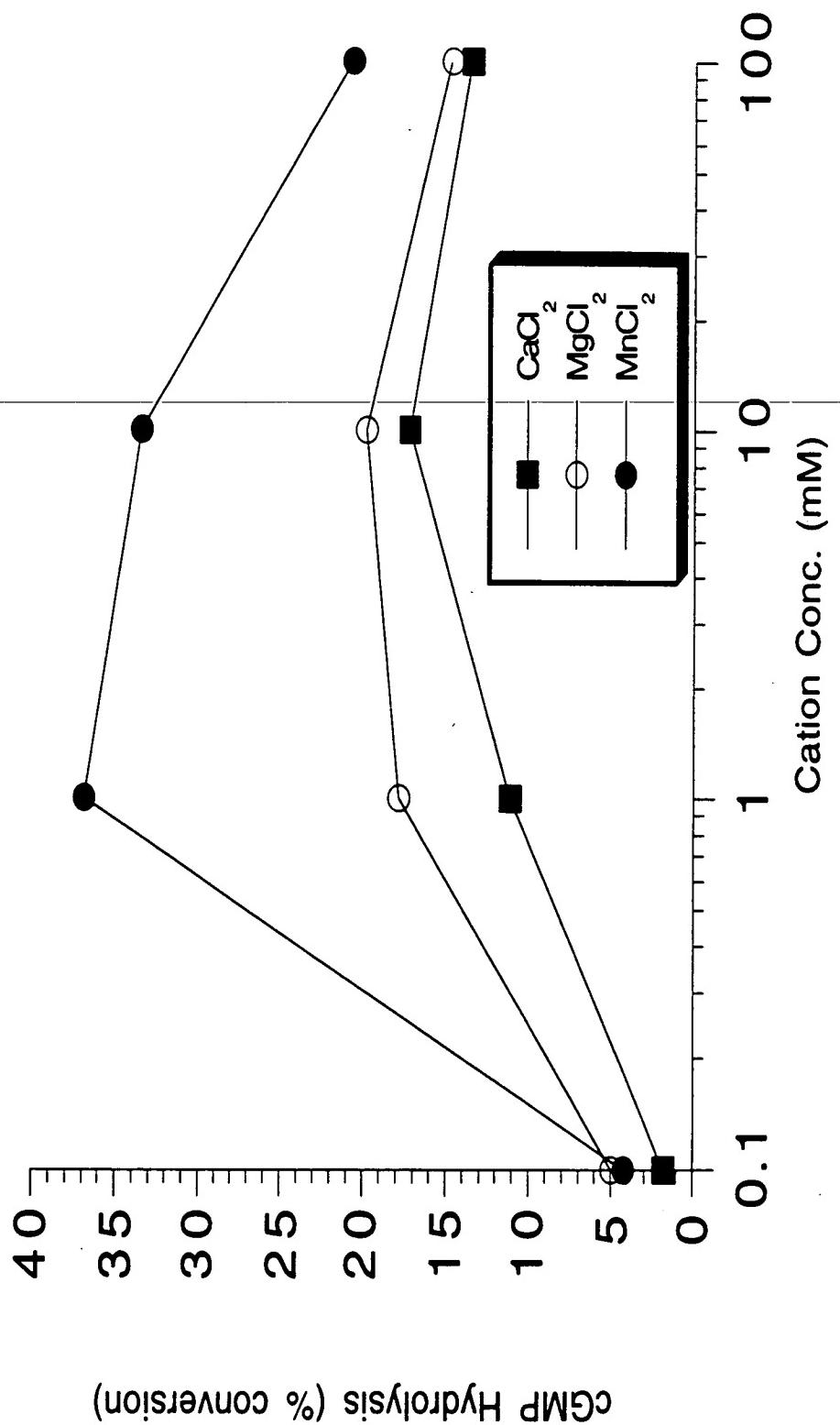


FIGURE 4

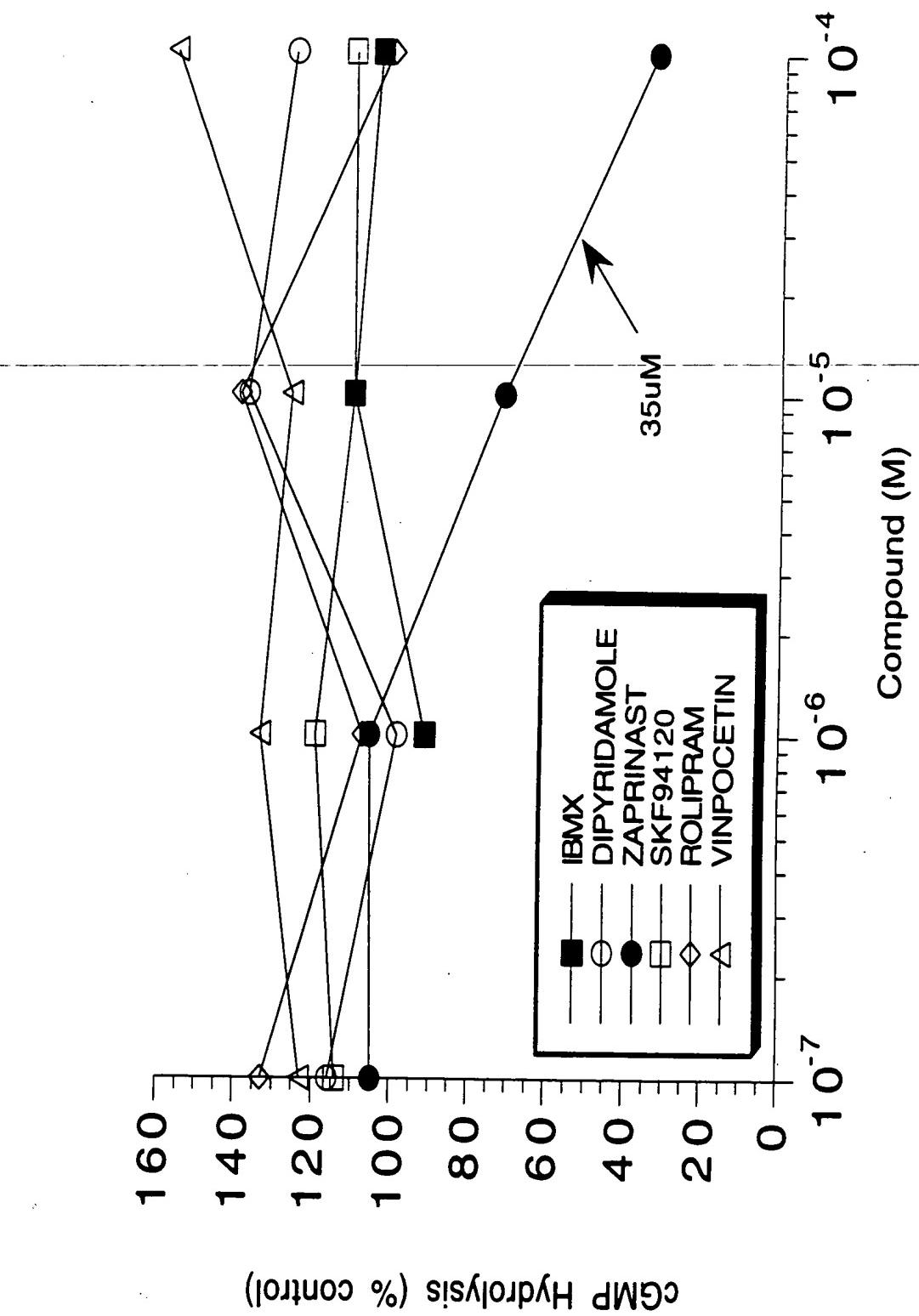


FIGURE 5